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DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Figure 1 represents a key-surround data input module keyboard or nesting module embodying principles of the present invention. It is shown from a top plan view to have a middle key 1 at its focus, a circular washer-shaped stationary key-surround key, and an optional, in this case circular, bordering wall 5 which here separates the middle key from its most adjacent key-surround key 2. In other embodiments, the key surround key need not be concentric nor more than substantially circular. Also, the key-surround key also need not completely surround the middle key. The bordering wall need not be present if the key parts which comprise the key-surround module are shaped and held into place by their actuating constructs as will be discussed below. Dotted line 3 and all other such lines of this key-surround module illustration represent either a dividing line between key parts or a dividing line between zones of actuating contact points depending upon the embodiment. Space 4 may therefore represent a key part in a key-arrangement key-surround key or an area of multiple actuating contact points in a floating pivotable key-surround key. This two-dimensional illustration is also applicable to any touch sensitive touch screen display displaying a graphical user interface of a key-surround data input module keyboard inputting device.

The Key-Surround data input module keyboard inputting device is not intended to be limited to, for example, a Qwerty keyboard embodiment whereas there are other embodiments such as Stenographic TM keyboards, musical keyboards and other inputting devices for other equipment which contain inputting values which can be inputted by the key-surround module inputting device. In the case of Figure 2, however,

1 middle key 6 has the key-value for "J", with a circular washer-shaped key-surround key
2 having the values, for keys numbered 7 through 11, for "U", "Y", "H", "N", and "M"
3 respectively. Whereas this figure depicts a top view, these key-values may be for parts of
4 a key-arrangement key-surround key as well as for areas of multiple actuating contact
5 points of a floating pivotable key-surround key. Depending on the embodiment, line 12
6 and dotted lines as 15 will represent spaces between key parts or dividing borders
7 between inputting areas. Line 16 may also represent the edge of a key-arrangement key
8 or demarcation of different contact areas of a floating pivotable embodiment. 13 and 14
9 represent key parts or areas which are free to carry any key-value which is suitable for
10 convenience and for the saving of inputting space.

11 Figures 3a, 3b and 3c represent several embodiments of key-surround modules.
12 Figure 31 illustrates a side view of a key-arrangement key-surround module where top
13 and bottom actuating contact point parts 18 and 19 are held apart by the flexible exterior
14 17. Dotted lines such as that of 20 here illustrate connections of such flexible material.
15 Top actuating contact point part 18 is attached to the inside top of the key-surround key
16 at 23 and actuating contact point bottom is secured to the base of the key-surround key.
17 Output signal is made once the exterior above the appropriate actuating construct, in this
18 case at 23, is pressed. Output is achieved in all key-surround keys of all embodiments of
19 the key-surround data input module keyboard inputting device by the user's pressing
20 down upon key-surround keys and not by rotating said key-surround keys. Actuating
21 contact points may be either, in this case, capacitive or hard-contact. The signal is
22 illustrated as 24 along the circumference and perpendicular to the circumference toward
23 the center of the key-surround key. Middle key 21 has one actuating contact point

1 beneath it at 22.. Middle key 21 has one actuating contact point beneath it at 22. Washer
2 25 is attached to the bottom of the key-surround module having a protrusion 26 which fits
3 into groove 28 of base 27. The groove allows a limited rotation of the key-surround key
4 in relation to the middle key.

5 Figure 3b also illustrates a key-arrangement key-surround key as Figure 3a,
6 however with some differences. Middle key 29 with actuating contact point 31, either
7 capacitive or hard-contact, nests within key-arrangement key surround key 30.
8 Perpendicular lines such as that of line 32 illustrate the divisions between the key tops of
9 the key parts which form the key-arrangement key-surround key. These divisions need
10 not be limited to being perpendicular with respect to the circumference of the key-
11 surround key as will be discussed below. Key 33 has beneath it one actuating contact
12 point 34 which can be either capacitive or hard-contact. This key-arrangement key-
13 surround key need not have any dividers between its individual inputting parts for its
14 shape and its actuating contact point 34 keep it in place and keep it from interfering with
15 the other key parts of the key-surround key. It is however possible to have a wall 35 as in
16 this case. Output signals are carried through circuits like that of 35, toward the center of
17 the key-surround key.

18 Figure 3c illustrates a key-surround data input module inputting device
19 embodiment which in this case has a trackball cursor navigating device as its middle key
20 surrounded by a floating pivotable key-surround key. Trackball 41 with actuating
21 constructs at 49 are in this case encircled by floating pivotable key-surround key 42
22 having flexible tubular material at its center which allows a springing action when the
23 key-surround key is pressed and released. It is possible in another embodiment to replace

1 said trackball with other forms of cursor or pointer navigating devices, here and
2 throughout the specification. A similar flexible tubular material 46 covers the exterior
3 sides of the key-surround key and also enables a springing action after the key-surround
4 key is pressed. When the key-surround key is pressed, nodes placed under the top of key-
5 surround key 42 and along the circumference of the key-surround key like that of 47
6 come into contact with actuating contact points like that of 48 causing an output signal to
7 be made. Said actuating contact points can be capacitive or hard-contact and are secured
8 to the bottom 51 of the key-surround key. Washer 52 attached to bottom of the key-
9 surround module has a protrusion 53 which fits into groove 55 on base washer 54 thereby
10 permitting limited rotation of the key-surround key. Dotted lines such as that of 43 and
11 spaces between such lines on the surface of the key-surround key such as 44 illustrate an
12 area where groups of nodes and their corresponding actuating constructs may carry the
13 same key-value thereby increasing the likelihood of the user inputting the key-value and
14 also extending the area upon which the user can perform the inputting task. Output signal
15 carriers such as that of 50 transport signals along bottom 51 towards the center of the
16 key-surround key.

17 Figure 4 illustrates a key-surround data input module keyboard inputting device
18 56 having a middle key 57, and a plurality of circular, washer-shaped key surrounds keys
19 58 and 60. Key-surround 58 is a key-arrangement key-surround key of, in this case, four
20 inputting parts. Key-surround 58 is curved at its top and protrudes in its nesting position
21 inside key-surround 60 so that it can be better distinguished by the user's tactile sense.
22 The key-surround data input module keyboard inputting device is not limited to these key
23 shapes and heights. Any given key-surround key may have its keys at any combination

1 of heights, shapes and textures in order to distinguish them from other keys and to
2 facilitate inputting. Dotted line 59 illustrates that the divisions between key parts need
3 not be solely perpendicular to the circumferences of their respective key-surround key.
4 Rather they can form any shape which in order to facilitate inputting and to create
5 distinguishable inputting key parts in the case of the key-arrangement key-surround keys
6 or areas of a floating pivotable key-surround key. In this case the divisions create a spiral
7 pattern from the inner circumference of key-arrangement key-surround key. Key-
8 surround 60 is a floating pivotable key-surround key similar to that in Figure 3c. It has a
9 flexible accordion-like side surface.

10 Key-surround data input module keyboard inputting device 56 is held in track 61
11 by its central peg 63 and peg support 64. Said peg is attached to the center of the base of
12 the key-surround inputting device and to said peg support 64. Said peg support is wider
13 than the width of said track and thereby is held securely in said track. Said peg support
14 travels on sub-track 65 which is as long as track 61. Said sub-track has a parallel space
15 66 below track 61 such that said peg support fits tightly within said parallel space. The
16 track can be in any manner of shapes, lengths and sizes depending on the desired path of
17 the key-surround inputting device.

18 Figure 5 illustrates a key-surround data input module keyboard inputting device
19 having a middle key-67, a circular washer-shaped first key-surround key 69, a second
20 circular, washer-shaped key-surround key 71 and a substantially circular, substantially
21 washer-shaped third key-surround key 73. In between said keys are divisions or spaces
22 68, 70 and 72. These key-surround keys may be any combination of key-arrangement or
23 floating pivotable key surround keys. The third key-surround is slightly extended at area

1 74 do that it may be easily accessed by the user. This illustrates that the key-surround
2 key need not be uniform throughout and may be amorphous in shape as well as not
3 necessarily be concentric with the other key-surround keys or middle keys.

4 Figure 6 illustrates an embodiment of the key-surround data input module
5 keyboard inputting device according to the present having a plurality of middle keys each
6 having a plurality of substantially circular, substantially washer-shaped and stationary
7 key-surround keys forming a series of nesting modules 75, 76, 77, 78, 79, 80, 81 and 82.
8 Figure six is divided into two parts at dotted line 86a. To the right of line 86 what is
9 depicted is the top view of the right half of the embodiment. To the left of line 86, what
10 is depicted is the top view of the left half of the embodiment with the key tops removed
11 to reveal actuating constructs and their bases.

12 Key surround 79 has at its focal point middle key 89 completely surrounded by
13 the first key-surround key 90 which is in this case circular. These keys are in turn
14 surrounded in part by key-surround 91 which is amorphously shaped, which is in turn
15 surrounded in part by key-surround 92. Adjacent key-surround module 80 has a middle
16 key 93 surrounded completely by key-surround key 94, oval in shape. These keys are
17 surrounded in part by crescent shaped key surround key 95, in turn surrounded in part by
18 key-surround key 96. Key-surround module or nesting module 81 is of the same
19 structure as key-surround module 80, having middle key 97, first key-surround key 98,
20 second key-surround key 99 and third key-surround key 100. Key-surround module 82
21 has a middle key 102 and first key-surround key 103 similar to middle key 89 and key-
22 surround key 90, respectively. Key-surround key 104 is amorphous and surrounds in part

1 key-surround key 103. This key-surround has an extension at area 105. Third key-
2 surround key 101 surrounds in part key-surround key 103.

3 To the left of line 86a is the left half of this embodiment of the key-surround data
4 input module keyboard inputting device revealing actuating contact points and their
5 placements which are beneath the key tops of key surround modules 75, 76, 77 and 78.
6 Key-surround module 75, has at its middle key interior base 108 and actuating construct
7 109 at its center. This actuating construct may either be a capacitive or an hard-contact
8 actuating construct. Surrounding this middle key actuating construct is the interior base
9 110 of a floating pivotable key-surround key having a flexible tubular stricture at 113
10 and a plurality of actuating constructs such as 111 in groups of four actuating constructs,
11 connected by circuits such as 112. In this configuration these groups of actuating
12 constructs hold the same key-values and serve to extend the area where inputting may be
13 achieved on the outer circumference of the floating pivotable key-surround key.
14 Dividing lines such as that at 114 mark the divisions of said common key-value inputting.
15 Said actuating constructs may be either hard-contact or capacitive. Attached to said base
16 110 is flexible tubular material 110a which allows for the springing back of the floating
17 pivotable key-surround key after it is pressed by the user at any point. Key-surround base
18 115 contains actuating constructs such as 116 for a key-arrangement key-surround key.
19 Actuating constructs are separated into groups of actuating constructs for arranged keys
20 at demarcation lines similar to that of 119. Amorphous key base 117 extends the key-
21 arrangement key-surround key and contains a series of actuating constructs such as that
22 of 118.

1 Actuating construct 124 is fixed at the base of the middle key of module 76.
2 Floating pivotable key-surround key base 125 contains two actuating constructs 123 and
3 126. Also part of this key base is a flexible tubular part 127 which allows the key to
4 more efficiently spring back after it has been pressed by the user. In this case it is not
5 necessary to have an exterior flexible tubular material such as 110a in module 75,
6 whereas the springing action of the flexible tubular part 127 and that of the actuating
7 constructs 123 and 126 are sufficient. The base of the second key-surround 120 contains
8 a single actuating construct 124 which may also be hard-contact or capacitive. Module
9 77 is of identical structures as those of module 76. Key-surround module 78 has a middle
10 key base 129 is very similar to that of 110 of module 75. Key-surrounds 130a and 130b
11 are secondary and tertiary key-surround key bases and each contain a plurality of hard-
12 contact or capacitive keys for, in this case, key-arrangement key-surround keys. Both
13 halves of the illustration of the key-surround inputting device embodiment of Figure 6 fit
14 into one another at point 131.

15 Key surround key modules 75, 76, 77, 78, 79, 80, 81 and 82 have one or more
16 key-surround keys. In this depicted embodiment there are a plurality of such key-
17 surround modules or nesting modules which form the key-surround data input module
18 keyboard inputting device. These nesting modules are arranged in this case in a concave
19 curved arrangement such that middle keys coincide with the curvature of the users finger
20 tips at rest for greater comfort. In other embodiments the keys may be aligned without
21 said curved arrangement, with differing numbers of key-surround keys and having
22 various shapes.

1 Below the four key-surround modules 79, 80, 81 and 82, in this case is one oval
2 key module 88. Key module 88 is of the same interior structure as that of key-module 86
3 in this case also oval in shape and placed beneath nesting modules 78 and 79. Said key
4 module 86 has a plurality of actuating constructs such as 87 which allow the user to press
5 any part of said key module in order to input the same value. It is possible also to place
6 more than one key-value to these actuating constructs which can either be capacitive or
7 hard-contact constructs. In this case beneath key-modules 75, 76, 77 and 78 there is
8 another nesting module 83 having trackball base with cursor navigating device actuating
9 constructs 85 and in this case two circular nesting key-surround keys 83a and 83b. The
10 surface of the inputting device 106 is in this case flat but may be of varying heights above
11 surface 106, of various inclines and of varying textures to facilitate the user's reach and
12 touch identification.

13 Figure 7 illustrates an embodiment of the key-surround data input module
14 keyboard inputting device according to the present invention having a plurality of key-
15 surround modules 132 and 133, each having a plurality of middle keys. Figure 7 is
16 divided into two parts at dotted line 141. To the right of line 141, Figure 7 depicts top
17 view of the right half of the embodiment. To the left of line 141, Figure 7 depicts the top
18 view of the left side of the embodiment with the key tops removed to reveal actuating
19 constructs and their bases.

20 To the right of said line 141, middle keys 134, 135, 136 and 137 serve as a
21 plurality of middle keys of the key-surround module 133. Said plurality of middle keys is
22 surrounded by a first key-surround key 138 which is in turn surrounded in part by a
23 second key-surround key 139, and, which is in turn surrounded by a third key-surround

1 key 140. It is not necessary in other embodiments to have this particular number of
2 middle keys or key-surround keys or even said number of key-surround inputting
3 modules. Said plurality of middle keys, in this case are aligned in a concave curvature on
4 the surface of the inputting device with said key-surround keys accommodating such
5 shape. Dotted lines within the module such as 142 are lines of demarcation representing
6 spaces between keys in certain embodiments or borders between areas of different key-
7 value inputting in others. At such lines it is possible to have separated keys, borders
8 between keys or continuous surfaces with actuating contact points beneath which change
9 in key-values at lines such as 141 (See Figures 3a to 3b). In such embodiments where
10 such lines represent physical separations of keys, the key-surround module may be
11 separated at such lines and moved on the surface 144 of the inputting device with an
12 underlying system of tracks as in Figure 8, discussed below. Beneath said inputting
13 device module 133 is a key module 134 here oval in shape.

14 First key-surround key base 154 is a key base for a combination key-arrangement
15 and floating pivotable key-surround key. Thus, said first key-surround base contains the
16 actuating contact points for key-arrangement key-surround keys and floating pivotable
17 key-surround keys. This key-surround contains a plurality of actuating contact points,
18 either capacitive or hard-contact. The arrangement keys consist of floating pivotable
19 key-surround key parts 148 and 155 at both ends of the key-surround key where they
20 partially surround middle key bases of middle keys 138 and 147, respectively. Key-
21 surround base 148 is that of a pivotable key-surround floating which partially surrounds
22 the middle key of which base key 138 is associated. Key-surround base 148 contains a
23 plurality of actuating contact points such as that of 149 in groups. Key-surround base

1 155 contains a plurality of actuating contact points such as that of 156 in groups. Said
2 actuating contact points can be either hard-contact or capacitive. Such groups of
3 actuating contact points share the same key-value and expand the area on such a key-
4 surround key where the user can input a certain key-value. A flexible part-tubular wall
5 151 surrounds the base for the floating pivotable key part extending around part of
6 middle key area associated to middle key actuating contact point 147 and extends around
7 the entire base 155. Said actuating constructs can be either hard-contact or capacitive.
8 Such groups of actuating constructs share the same key-value and expand the area on
9 such a key-surround inputting device where the user can input a certain key-value. A
10 flexible part-tubular wall 151 surrounds the base for the floating pivotable key part
11 extending around part of middle key area associated to middle key actuating construct
12 147 and extends around the entire base 155. The rest of the key bases such as 160 on this
13 key-surround key 154 are those for key-arrangement keys surrounding in this case, four
14 middle keys and connecting the floating pivotable areas 148 and 155. Lines of
15 demarcation such as that of 159 designate where keys are separated by spaces or border
16 walls separating each key base that has actuating constructs with different key-values. In
17 other embodiments where the key-tops are continuous (See Figure 3a) these lines merely
18 designate where such actuating constructs have different key-values.

19 The second key-surround key base 161 is a base with actuating contact points for
20 a combination key-arrangement and floating pivotable surround key. Actuating contact
21 points such as that of 167 of base 162 surround and in this case particularly surround key-
22 surround base area 148. Circuit 169 connects all actuating contact points so that in this
23 case each actuating contact point of base 162 will signal the same key-value. Base 162 is

1 further divided into bases for key arrangement key-surround keys having groups, in this
2 case of two, four or three actuating contact points, each group having the same key value.
3 The third key-surround base 163 of module 132 is a base for a key-arrangement key
4 surround key having actuating contact points and partially surrounding said second key
5 surround 161. All said actuating contact points being either hard-contact or capacitive.

6 Below key-surround module 132 there is in this case a nesting module 164 having
7 a trackball cursor navigating device actuating contact point 166 and in this case two
8 circular key-surround keys 82a and 82b. The surface of the inputting device 144 is in this
9 case flat but may be shaped to allow better access to keys and more comfortable
10 inputting. Oval key module 170 is centered below key-surround inputting modules 132
11 and 133 illustrated in part with key top and part without with underlying base part having
12 a plurality of disbursed actuating contact points such as 172 which can be either
13 capacitive or hard contact contact points. Oval key module 170 may also have a flexible
14 tubular wall 171 which surrounds the entire key module in order to ameliorate the
15 springing movement of the key module after it is stricken by the user. Key module 143 is
16 of the same interior structure as that of key module 170 and shares similar structure.
17 Actuating constructs such as that of 172 may have the inputting circuitry for the same key
18 value so that the user may press any part of said key module in order to input the same
19 value. It is possible also to place more than one key-value to these actuating contact
20 points which can either be capacitive or hard-contact contact points. All said keys may
21 be of varying heights above surface 144, of various inclines and of varying textures to
22 facilitate the user's reach and tactile identification. Additionally, key-surround modules
23 132 and 133 are made to fit into such as points similar to 173 in order to save space and

1 better accommodate the user. In certain embodiments key-surround modules have dual
2 washers beneath the base levels discussed above by which certain or all key-surround
3 keys may be rotated with respect to other keys such as middle keys or other key-surround
4 keys. Such washers such as those depicted in Figure 3a, 25 and 27, Figure 3b, 36 and 39
5 and Figure 3c 52 and 54 are attached beneath the relevant key-surround bases described
6 above. In other embodiments the number of keys, key shapes and placements of the key-
7 surround data input module keyboard inputting device will vary.

8 Figure 8 illustrates a system of tracks which is beneath the surface of the key-
9 surround data input module keyboard inputting device, and specifically, beneath key-
10 module bases described above. Track surface 174 in this embodiment is divided into
11 three groupings of eleven tracks: 175, 176, 177, 178 and 179 of the left grouping 180,
12 181, 182, 183, 184 and 185 of the right grouping 186 with track 187 as the center
13 grouping. Each of these tracks holds one nesting or key module.

14 Tracks 175, 176, 177, 178 and 179 of grouping 180 hold pegs 188, 189, 190, 191
15 and 192 respectively. Each said peg, identical to that of Figure 4, 63, connects key-
16 surround module bases represented as 197, 198, 199, 200 and 201 to peg supports. Peg
17 supports 202, 203, 204, 205 and 206 slide tightly against the back of surface 174 with
18 said pegs in tracks in order to anchor the pegs such that the key or nesting modules
19 attached to said pegs are secured against the key-surround inputting device.

20 Tracks 181, 182, 183, 184 and 185 of grouping 186 hold pegs 192, 193, 194, 195
21 and 196 respectively. Each said peg, identical to that of Figure 4, 63, connects key-
22 surround module bases represented as 207, 208, 209, 210 and 211. Peg supports 212,
23 213, 214, 215 and 216 slide tightly against the back of surface 174 with said pegs in

1 tracks and anchor the pegs such that the key or nesting modules attached to said pegs are
2 secured against the key-surround inputting device. In this case track 179 holds the
3 nesting module having trackball and two nesting key-surround keys depicted as 218. The
4 central track 187 holds peg 218 connecting base 220 to peg support 221 for in this case
5 the oval key module. A similar system of tracks may be utilized beneath these tracks so
6 that groups of key-modules or nesting modules may be positionally displaced in unison.

7 Figure 9, labeled as "prior art" is a top view illustration of a conventional Qwerty
8 inputting device having keys with key-values placed in the "Qwerty" scheme of key-
9 value placement. This is a conventional Qwerty keyboard with regard to the key
10 placement relationships of keys depicted with key-values. Keys without values such as
11 223, 224 and 225 can on different Qwerty keyboards have different key-values and
12 Figure 9 illustrates these key-values as the minimum of Qwerty key-values. Key 226
13 represents the "Space" bar or key. Key-values of this keyboard may be inputted by the
14 key-surround module inputting device whilst maintaining the positioning and the
15 relationship among and between key-values. The keys of the Qwerty keyboard are
16 included within this specification not to limit the applicability of the Key-Surround
17 Module inputting device. Rather, it is offered to suggest an applicability of certain
18 embodiments of the Key-Surround Module inputting device.

19 Figure 10, illustrates an LCD diode-illuminated matrix display screen overlaid
20 by a touch screen. Other kinds of displays and touch screen combinations may also be
21 utilized without altering the spirit of the invention.

22 Figure 10 illustrates the touch sensitive touch screen display of this
23 embodiment having an LCD matrix display depicting key-surround modules as a

1 graphical user interface and a touch screen overlay. The depictions of key-surround
2 modules 227, 228, 229, 230, 231, 232, 233, 234, 235 and single key-modules 236 and
3 237 serve in this touch sensitive touch screen embodiment of the key-surround data input
4 keyboard inputting device as a graphical user interface. Graphical user interfaces are
5 screen depictions which bring forth an action with the user's, in this case touch,
6 interaction.. Figure 10 is divided into two halves separated at dotted line 238 for
7 convenience. To the right of line 238 at 254 is an illustration of the touch sensitive touch
8 screen display as it would be seen by the user. To the left of line 238 is an illustration of
9 the touch sensitive touch screen display which is mounted on top of said LCD matrix
10 display. This left side illustrates disproportionately enlarged touch sensing elements
11 which are actually unseen conductive circuits which detect current changes at points of
12 the user's touch. Differing diagonal and crossed lines distinguish the different parts of the
13 graphical user interface key-modules. When the user touches the touch screen, the point
14 of touch is processed in respect to its coordinates on the touch screen and with respect to
15 the corresponding point coordinates of the LCD matrix display directly underneath and of
16 identical surface area.

17 Looking at the right of line 238 of the display, key-surround modules 231, 232,
18 233 and 234 are seen depicted with middle keys 238, 239, 240 and 241 in a concave
19 curved alignment. This curvature is unique to this particular embodiment and need not
20 be present in others. Middle key 238 is displayed nested within a circular concentric first
21 key-surround 242, a second key-surround 243 is amorphously shaped and partially
22 surrounds said first surround key. Third key surround 244 is displayed to surround said
23 second key-surround key together depicting the key-surround module 231. The key-

1 surrounds and the middle key, as with other keys in this embodiment, need not be circular
2 nor concentric. Adjacent key-surround module 232 has middle key 239, oval shaped first
3 key-surround 245 which surrounds, however only in part, said first key-surround key.
4 Third key-surround key 247 is displayed to partly surround said second key-surround
5 key. Key-surround module 233 is depicted to have a middle key 240, oval shaped first
6 key-surround key 248 which surrounds said middle key, crescent shaped second key
7 surround 249 which in turn surrounds, however only in part, said second key-surround
8 key. The second and third key-surround keys are not concentrically depicted with regard
9 to said middle key. Key surround 234 is depicted to have a circular middle key 241
10 nested within a circular key surround first key-surround key. A second amorphous key-
11 surround key 252 is depicted to partially surround said first key-surround key. Centered
12 below these four displayed key-surround modules 231, 232, 233 and 234 is displayed
13 oval key module 237. Background 254 is displayed to surround all said displayed keys.

14 On the left of dotted line 238 of Figure 10 this display embodiment is shown to
15 have embedded touch sensing elements within its display screen at each of the key
16 depictions of said display inputting device. Touch sensing elements are conductive
17 circuit elements and are embedded within the display panel in this particular
18 embodiment. The display may be of a liquid crystal display or other conductive yet
19 illuminated display. This in turn partly surrounded by third key-surround key 266
20 divided into two areas of touch.

21 Key-surround module 227 is displayed with circular middle key 255. Said middle
22 key has one circular area of circuit elements for the detection of touch. The first key-
23 surround key which surrounds middle key 255 has six divisions 258, 260, 261, 262, 263

1 and 264. This key-surround key is surrounded by amorphous second key-surround key
2 265 with, in this case, five areas of circuit embededness. This in turn partly surrounded
3 by third key-surround key 266 divided into two areas of touch circuitry. The adjacent
4 key-surround module 228 has a middle key display entirely dispersed with touch circuits.
5 Said middle key is surrounded by first key-surround key that has two areas 267 and 267a
6 which are separately embedded with touch sensing circuits. Said middle key is
7 surrounded by first key-surround key that has two areas 267 and 267a which are
8 separately embedded with touch sensing circuits. Second key-surround key 268 is
9 embedded with one area of circuits and is displayed as partly surrounding first key-
10 surround key. Third key-surround key 269 partly surrounds 268 is also entirely
11 embedded with one area of touch circuits. Next adjacent key-surround key 299 has a
12 circular middle key the whole of which is embedded with one touch circuit area. This
13 middle key is completely surrounded by an oval display first key-surround key which has
14 two areas of embededness 270 and 270a, such that two key-values may be detected in
15 these two areas of the same key-surround key. The second key-surround key 271
16 partially surrounds said first key-surround. Third key-surround key 271 partially
17 surrounds said second key-surround key, and is likewise completely embedded with one
18 area of touch sensing. Key-surround module 230 has a display middle key 258 which
19 consists of one circular area of touch. This middle key is surrounded by a first circular
20 area key-surround key with several different areas of embedded touch circuits 273, 274,
21 275, 276 and 277 where each separate detection area olds a different key-value, The
22 second key-surround key 278 of this display module partially surrounds said first key-

1 surround and has two separate areas of embeddedness. Third touch key-surround key 279
2 is also divided into two areas of touch.

3 Below said four touch key-surround molecules 227, 228, 229, 230 is displayed a
4 touch nesting module 235 with a circular display cursor navigating center 280 having
5 touch circuitry which can detect movements of touch or changing positions of touch.
6 This middle key is surrounded by first touch circular key-surround key 281 having four
7 areas of touch circuitry, in turn completely surrounded by a second touch key-surround
8 key having five areas of touch circuitry. Displayed beneath and centered between key-
9 surround modules 230 and 231 is an oval area 236 having one area of touch sensing
10 circuitry. Displayed beneath and centered between key-surround modules 230 and 231 is
11 an oval area 236 having one area of touch sensing circuitry. Background 283 can be
12 without any touch circuitry, may have circuitry which has a very low touch sensitivity, or
13 it may have higher touch sensitivity possibly to alert the user if she is inputting out of key
14 bounds.

15 Said touch key shapes are unique to this particular embodiment and may be varied
16 in other embodiments. For example some keys which are described as circular may be of
17 other shapes. Also, borders of touch keys are outlined to show boundaries of display
18 keys however they need not be used in their embodiments, for example different areas of
19 key sensitivity may be in different colors or brightness in juxtaposition to other touch key
20 areas. And whereas a plurality of key-surround key has been described in this
21 embodiment of the key-surround module inputting device, another embodiment of the
22 inputting device may have only one key module. Also the number of key-surrounds need
23 not be as high nor be limited in number as those described in this embodiment.

1 Secondly, the area to the left of dotted line 238 may also be described as
2 being solely a touch screen layer with display shapes illuminating through and
3 highlighting touch sensitive areas. With such an interpretation, Figure 10 also serves as
4 an illustration of two parts of a touch screen display system illustrating the display screen
5 in half of the illustration to the right of dotted line 238, and the rest of same display
6 screen, the left half covered by a separate touch screen area. Thus, a second such
7 embodiment may be described having a touch screen which covers a separate display
8 underneath.

9 Figure 11 is divided into two halves separated at dotted line 287 at 300
10 illustrating a touch sensitive touch screen display having an LCD matrix display and a
11 touch screen. The illustration to the right of line 287 is the touch sensitive touch screen as
12 it would be seen by the user. To the left of line 287 is an illustration of the key-surround
13 inputting device display screen which depicts touch sensing elements which are built into
14 the display regions or areas. The touch sensing elements are enlarged to show detail.

15 Looking at the right of line 287 of the display, key-surround modules 286 is
16 depicted with middle keys 292, 293, 294 and 295 in concave curved alignment. This
17 curvature is unique to this particular embodiment and said keys may be of different
18 alignment in other embodiments. Also, in other embodiments this number of middle
19 keys and the number of key-surround modules can differ. Surrounding these middle keys
20 is a key-surround key 296 which follows the curvature of said middle keys and entirely
21 surrounds them. This first key-surround display key is surrounded in part by a second
22 key-surround key 297 and is depicted to partially surround said first key-surround key. A
23 third key-surround key 298 partially surrounds said second key-surround key. Below this

1 display key-surround module 286 is, in this case, an oval display key module 299 and
2 surrounding these modules is background 300.

3 To the left of line 287 the illustration shows the touch sensing areas of the present
4 embodiment of the touch key-surround module inputting device. With regard to the
5 depiction of key-surround module 285, depicted middle key areas 288, 289, 390 and 291
6 are completely embedded with single circular areas of touch. These keys are surrounded
7 by a first touch key-surround key which has a plurality of spaces which are separately
8 embedded with touch sensing elements. Second display key-surround 302 surrounds said
9 first key-surround key and has a plurality in this case six area of touch sensing elements
10 to that each area may be given a different touch key-value. The third touch key-surround
11 key 303 surrounds partially said second display key-surround key. In between said
12 middle keys are three display areas 304, 304a and 304b which like background 311 can
13 be of either low touch sensitivity or high touch sensitivity depending on the benefit to the
14 user. Below said touch module 285 is nesting module 305 which has as its middle key a
15 cursor navigating touch key 306 having a circular area of touch sensing which can detect
16 movement of the user's touch or changes in placement of touch. This middle key has a
17 first key-surround key 307 which is circular and has four areas of touch. A second
18 display key-surround key is divided into five areas of touch and which surrounds said
19 first key-surround key completely. Below and centered between display modules 285
20 and 286 is depicted touch key module 309 having one area which is embedded with one
21 area of touch sensing.

22 Said touch key shapes are unique to this particular embodiment and may be varied
23 in other embodiments. Keys in other embodiments may be of different shapes than those

1 illustrated. The illustrated borders of touch key are outlined to show boundaries of keys
2 however they need not be used in other embodiments, for example different areas of key
3 sensitivity may be in different colors or brightnesses in juxtaposition to other touch key
4 areas. And whereas a plurality of keys-surround keys has been described in this
5 embodiment of the key-surround module inputting device, another embodiment of the
6 inputting divide may have only one key module. Also the number of key-surrounds need
7 not be as many nor be limited in number as those described in this illustration.

8 Secondly, the area to the left of dotted line 287 may also be described as being
9 solely a touch screen layer with display shapes illuminating through and highlighting
10 touch sensitive areas. With such interpretation, Figure 11 also serves as an illustration of
11 two parts of a touch screen display system illustrating the display screen in half of the
12 illustration to the right of dotted line 287, and the rest of same display screen, that which
13 is to the left, covered by a separate touch screen. Thus, a second such embodiment may
14 be described having a touch screen which covers a separate display underneath.

15 Figure 12 illustrates a top view of the key-surround data input module keyboard
16 inputting device which may apply to various embodiments of the inputting device.

17 Figure 12 depicts a top view which has applicability to various embodiments of
18 the key-surround data input module keyboard inputting device. The key-surround data
19 input module keyboard inputting device of Figure 12 contains key-values of the
20 conventional Qwerty keyboard placed so that Qwerty key relationships and positions are
21 maintained. Qwerty inputting can be achieved on the smaller surface area of the key-
22 surround data input module keyboard inputting device. The key-surround module
23 inputting device of Figure 12 contains key-values of the conventional Qwerty keyboard

placed so that Qwerty key relationships and positions are maintained while such key-values and inputting can be achieved on the smaller surface area of the key-surround module inputting device. Key-surround module 312 has the key-value for "A" at its middle key, a first key-surround key having the key-values for "Q", "Capslock" and "A", and, a second key-surround key having the key-values for "!", "1", "Esc", "Shift", "Fn" and "Ctrl". Key surround module 313 has the key-value for "S" as its middle key, a first key-surround key having the key-values for "W" and "X", and, a second key-surround key having the key-values for "@", "2" and "Tab". Key surround module 314 has the key-value for "D" at its middle key, a first key-surround key having key-values for "E" and "C", and, a second key-surround key having key-values for "#", "3" and "NumLock". Key surround module 315 has the key-value for "F" at its middle key, a first key-surround key having the key-values for "R", "T", "G", "B" and "V", and, a second key-surround key having the key-values for "\$", "4", "%", and "5". Key surround module 316 has the key-value for "J" at its middle key, a first key-surround key having the key-values for "U", "Y", "H", "N" and "M", and, a second key-surround key having the key-values for "Backspace", "^", "6", "&", "7" and "Ins". Key surround module 317 has the key-value for "K" at its middle key, a first key-surround key having the key-values for "I", "<", and ",", and, a second key-surround key having the key-values for ":", "8" and "Alt". Key surround module 318 has the key-value for "L" at its middle key, a first key-surround key having the key-values for "O", ">", ".", and, a second key-surround key having the key-values for "(", "9" and "Del". Key surround module 319 has the key-value for ";" at its middle key, a first key-surround key having the key-values for "Ctrl", "P", "[", "]", "'", "?", and, a second key-surround

1 key having the key-values for ")", "0", "+", "=" and "Shift". In other embodiments the
2 placements of key-values may be re-arranged to best suit the convenience of the user.
3 Key-module 322 has the key-value for "Space"; also a frequently inputted Qwerty key-
4 value, placed for easy reach by the user. It is possible in another embodiment to include
5 such enlarged key modules with key-values such as for "Esc", "Backspace", "Shift",
6 "Alt", "Ctrl" or other frequently used key-values in easily accessible locations on the
7 key-surround module inputting device. Nesting module 322 has the key-value for a
8 cursor navigating device at its center and other directional and click key-values at its
9 surround keys for related and easy access for the user. This embodiment of the key-
10 surround inputting device is only one embodiment of keyboard key-surround module
11 inputting. Other embodiments of the key surround inputting device may include
12 Stenograph™ key key-values and musical instrument key key-values. In an alternate
13 embodiment the key-values found in Figure 12 could be adapted to a touch sensitive
14 touch screen display embodiment.

15 It will be understood that each of the elements described above, or two or more
16 together, may also find a useful application in other types of constructions differing from
17 the types described above. And while the invention has been described and illustrated as
18 embodied in inputting devices, it is not intended to be limited to the details shown, since
19 various modifications and structural changes may be made without departing in any way
20 from the spirit of the present invention.

21 Without further analysis, the foregoing will so fully reveal the essence of the present
22 invention that others can, by applying current knowledge, readily adapt it for various

1 applications without omitting features that, from the standpoint of prior art, fairly
2 constitutes essential characteristics of generic or specific aspects of this invention.
3 What is claimed as new and desired to be protected by Letters Patent is set forth in the
4 appended Claims.
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